



MEMBER ASSOCIATION OF



NEWSLETTER  
SEPTEMBER, 1984.

#### FEDERAL PRESIDENT'S COLUMN

In view of the recent announcements of state branches, it is quite apparent that the Australian Society of Dentistry for Children is going from strength to strength.

For those who are not aware, the various state branches have, since last November, organised three continuing education programmes, and three more have been announced.

The three earlier ones were held in Perth, Melbourne and Adelaide. The others will be held in Melbourne on Friday 7th September, in Sydney on 18th & 19th October and in Brisbane on October 20th & 21st. These will be followed by the I.A.D.C.C. International Congress in Costa Rica, 20-24th February, 1985.

If you are thinking of attending any or all of these meetings I urge you to get on to it and register, because all of the programmes are top class.

It seems to me that children's dentistry has reached new heights in recent years, and I would like every one of us to try to recruit just one new member. If we are successful, then we could double our membership and our efforts in promoting postgraduate programmes and excellence in our dealings with children.

Don't forget, we have our Election of Office Bearers for 1984-86 in October, at the Biennial Convention. Come to the meeting with your ideas and recommendations. Most of all your presence and support is essential. ENCOURAGEMENT is the order of the day. All of us are inspired and motivated by encouragement. Let us keep the initiatives flowing and the Society will remain healthy.

If cost is a problem, try 'Standby'. This may be the answer for many of us.

I look forward to seeing you in Sydney and spending a relaxed couple of days listening to our favourite topic - dentistry for children.

Des Kailis

#### THE FEDERAL SECRETARY'S REPORT

A reply has been received from the Journal of Pediatric Dentistry. Individual airmail cost would be US \$61 per year; bulk airmail parcel, to a single address in Australia would be US\$52.94 per year.

A similar reply has been received from the Journal of Pedodontics. Their individual airmail cost is US\$73.00, bulk posted is US\$70.00.

As Federal Secretary I receive many publications from the Federal A.D.A. Of particular interest is the calendar of dental events. Members are reminded that 'the calendar' and other publications are regularly listed in the Federal A.D.A. Newsletter and are available for perusal at state A.D.A. offices.

John Brownbill

## NOTES FROM THE BRANCHES

### VICTORIAN BRANCH

The Branch is gearing up for its Seventh Annual Convention Day on September 7th. This year the venue is the Lawn Tennis Association of Victoria at Kooyong and the line up of Speakers will be in keeping with the theme "A Potpourri of Childrens Dentistry". Topics include Periodontal Disease, Oral Surgery, Orthodontics, Minor Trauma, Behaviour Management and Materials all related to Childrens dentistry. Local interest has so far been high and an invitation to interstate members of A.S.D.C. has been made.

The Branch has had one dinner meeting since the last newsletter. The meeting was attended by 44 members and guests. Our Guest Speaker was Ms. Christine Denny who is Information Officer at the Childrens Television Foundation. Ms. Denny spoke on the effects of television on children and the work accomplished by the Foundation. Mention was made in particular of a recent survey undertaken by the Australian Broadcasting Tribunal. The results of this survey suggest that children, in particular those from the lower socio-economic groups, may be influenced in their dietary behaviour by television and advertisements. Nutritional knowledge was also found to be poorer in those children who watched greater amounts of television.

Violent behaviour in children following viewing of violent television programmes was also mentioned by our Speaker. This has frequently been the subject of research in this field. Ms. Denny pointed out that this effect may be modified by the child's interpretation of the situation. Fantasy settings may for example reduce the effect in as much as the child interprets the programme as 'unrealistic'.

At this dinner meeting a Presentation was made to Dr. Mario Gavita following his gaining the Childrens Dentistry Award in his Final Examinations in 1983. Dr. Gavita was presented with a selection of scientific books, and congratulations were offered to him on behalf of our Branch of A.S.D.C.

Mike Morgan

### QUEENSLAND BRANCH

As announced in the last newsletter, Dr. John Brown has been lost to our ranks. He has moved to San Antonio in Texas to take up the Chair in Community Dentistry.

At our last meeting members gathered at the United Services Club where over dinner we farewelled John. President Bill Wilson stressed John Brown's great contribution not only to the Queensland Branch, but also to Dentistry in Queensland, and conveyed to John and his family our best wishes for his future.

Our very interesting Guest Speaker was Ms. Judy Dixon, a Speech Pathologist at the New Farm Spastic Centre. Ms. Dixon presented an excellent video film showing the stress placed by the therapists (Physio, Occupational and Speech) on good nutrition, good feeding positions, correct positioning for the dental procedure and the necessity of obtaining two-way communication with the cerebral palsied patients. She instanced situations where the C.P. Patient was angry and frustrated after a visit to the Dental Surgery. This arises when no positive feedback is obtained - the patient being virtually ignored as a communicant, with any conversation going over the patient's head and being directed at the accompanying parent or nurse.

The second Guest Speaker, Dr. Don O'Donoghue, spoke mainly about tongue thrust habits associated with mouth-breathers ...the causes and treatments. Dr. O'Donoghue emphasized the value of early consultation with a Speech Pathologist to explain to these patients normal swallowing and how to achieve lip seal.

Also discussed at the meeting were the final plans for our Clinic Weekend 29-31 October. The Guest Speaker will be Roger Hall who will come on to Brisbane right after the A.S.D.C. Bi-ennial Convention in Sydney the day before. The main thrust of Roger's address will be on treatment of handicapped children. With such a knowledgeable speaker combined with the delightful setting of the "Smithfield Restaurant" in Toowoomba this augurs well for a dentally stimulating experience.

Bill Whittle

#### S.A. BRANCH

The Branch had another successful dinner meeting at the Adelaide Childrens Hospital on June 26th. After dinner Dr. Evelyn Robertson, who is the Deputy Director of Chemical Pathology at the Hospital, gave a lecture on prenatal, natal and postnatal screening for detection of various forms of chemical and metabolic abnormalities which are incompatible with leading a normal life. Early detection in pregnancy gives the parents choice to have such a pregnancy terminated. This service is usually utilised by parents who already have an affected child. Since the autosomally recessive inherited disorders affect one in four, these parents have eventually the chance to have a normal baby.

Other disorders, such as Phenylketonuria may be detected at birth and treated. Every baby is tested for this disease. At present the Chemical Pathology Department at A.C.H. is the Australian centre for pre-natal detection of inherited metabolic disorders.

Everyone present found the subject of Dr. Robertson's talk most interesting, even though it was not directly related to clinical dentistry. Many of us treat children with handicaps and this meeting gave us the opportunity to realise more fully that active research is in progress and that some problems in this very important area are being solved.

The next meeting is on September 18th, the Guest Speaker will be Dr. Phil Turner, who will broaden our knowledge on "Veterinary Dentistry".

Several of our members are looking to travelling to Sydney in October for the Society's 5th Biennial Convention. It promises to be a very stimulating meeting and our branch wishes it every success.

Vita Luks

#### WEST AUSTRALIAN BRANCH

The most recent meeting of the Branch was held, as usual, at A.D.A. House in West Perth. Those who attended were well rewarded. The subject was "A Combined Orthodontic and Surgical Approach for the Treatment of Gross Discrepancies of the Jaws"; the Presenters were Perth Specialists, Orthodontist Kim Mezger and Oral Surgeon, Ian Rosenberg. Their results speak for themselves.

Most of their cases were in late-adolescent or adults, but there was one case presented of a primary school lad who was treated in the mixed dentition stage. This was against the better advice of the operators, particularly bearing in mind there were problems of geography - the patient and his family came from Karratha, which is over 1500 kms north of Perth in the Pilbara Area of the State. Despite the operators reservations, the patient and his family were most determined, so co-operation was guaranteed, and the result proved most satisfactory.

Altogether a most interesting and enjoyable evening despite the best efforts of the projector to thwart the evening's proceedings.

The next meeting of the Branch will be on 26th September when the Speaker will be A.S.D.C. Federal President, Associate Professor Des Kailis. His topic will be "Fluoride Update".

Alistair Devlin

#### TASMANIAN BRANCH

The Branch has not had a formal meeting since the last issue of the newsletter, but one is planned for the foreseeable future.

Some of our members are planning to come to Sydney to the Biennial Convention and are looking forward to meeting members of some of the other branches.

Felix Goldschmeid

[ The production of this Newsletter  
has been assisted by  
Colgate Palmolive Pty. Ltd. ]

#### N.S.W. BRANCH

Preparations for the A.S.D.C. Biennial Convention are now in the final stages and already numerous acceptances have been received for attendance.

Brochures were sent out in late July, so all A.S.D.C. members should now be in receipt of one. Any member who has not received a Brochure should get in touch without delay with -

Dr. Alain Middleton  
Castle Close  
2/6 Old Castle Hill Road  
CASTLE HILL. N.S.W. 2154

The Conference Dinner is to be held in The Summit Restaurant. High above the city, the view is exciting and changing constantly.

On the Wednesday evening prior to the Conference a Cocktail Party is to be held for all members. This will give all present a chance to meet old friends and to make new ones.

Since the last Newsletter the Branch has held two meetings. The first of these with Dr. J. Lucas of Melbourne as our Guest Speaker - his topic "Things that go bump in the night; The Birth of Growth Studies". Dr. Lucas' talk outlined the new course in the Dental Curriculum in the Dental School, University of Melbourne.

At the second meeting our Guest Speaker was Dr. Chris Commens, a Specialist Dermatologist in Sydney. He spoke at length on the hazards of the various dermatological conditions as they affect dentists - no doubt most members present checked their patients twice the next day before commencing treatment.

Alain Middleton

## **The Australian Society of Dentistry for Children**

### **5th Biennial Conference**

**Thursday and Friday  
18th & 19th October  
1984**

**Sydney Opera House**

*Sydney*



### Herpetology and the Child

(Summary of a Paper\* presented at the S.A. Branch's Country Convention - March 1984)

While the bulk of herpetological endeavour bares no relationship to children or to medicine, they do come together in the area of Snake Bite.

There are four major orders of reptiles; the first crocodiles and alligators; the second, tortoises and turtles; the third, contains just one lizard found only on islands off New Zealand; the fourth, the largest, contains all of the lizards and snakes. Within Australia there are five families of lizards; the Skinks ranging from the tiny Drop-tailed to the large such as the Sleepy Lizards and Blue-Tongue. Second the Dragon Lizard family containing such as the Frilled-Neck Dragon, and the spectacular Water Dragons of Eastern Australia; third, all of the Geckos, small nocturnal insect eating lizards; fourth, the Goannas, Australia's largest lizards; and finally the legless lizards, with a superficial resemblance to snakes, but with fleshy rather than forked tongues, different belly scales, and a number of other anatomical differences; legless lizards are all entirely harmless to man.

There are many species of snakes in Australia including some of the worlds most dangerous. The most primitive are the Blind Snakes, living most of their lives burrowing beneath the surface of the ground and harmless to man. The File snakes, primitive aquatic snakes are found only in northern Australian waters. The Python and the Boa group, represented in Australia by a number of species ranging from fairly small to very large, kill all by asphyxiating their prey. They may have many long fine teeth which inflict a painful bite but they are completely non-venomous.

Both in terms of numbers of individuals, and diversity of species, the family Elapidae is the most important snake family in Australia; all have small fangs in the front of the mouth, and produce venom. However many species are small, and only a few are potentially dangerous to man. Those dangerous to man have an adult length of sixty centimetres or more, and may reach in excess of three metres in length. The Sea snakes relatively common in northern Australian waters are closely related to the elapid snakes and are similarly dangerous.

Clearly lizards and tortoises are no real threat to children while their main interaction will be to provide education, companionship, pets. Crocodiles are different and, though rarely, people are still killed by large rogue crocodiles in northern Australia, but these events usually can be associated with gross carelessness on the part of the victim. As for the snake, there are a vast number within Australia, yet very few people are bitten, and very few of them die, though occasionally a child may succumb to the potent venom of one of our larger species.

Relatively few epidemiological studies have been performed on Snake Bite, but those available show it is a relatively minor problem in Australia compared with most other regions in the world. In Australia, while there may be between 1,000 and 3,000 cases per year, only a small minority develop major problems as a result of the bite. In recent years few people have died from snake bite, and over the last 20 years in Australia the yearly average number of deaths have been less than 5. This figure is still dropping. We must accept snakes as an important part of our environment and with reasonable precautions few people will ever be bitten by them, and of those who are virtually none will die as a result of the bite.

All of Australia's potentially dangerous venomous snakes have small fangs at the front of the mouth. The venom, a modified saliva produced in glands situated behind the eye, travels via duct to the base of the fang, enters an enclosed groove and exits near the tip. Because the fangs are small it is impossible for Australian snakes, except a few large specimens, to inject more than a small quantity of venom just beneath the surface of the skin. Perhaps because of this inability to deliver a large quantity of venom, Australian snakes have had to develop potent venoms.

The purpose of venom is twofold, being both a way of rapidly killing the prey, as well as assisting digestion of the prey from within. Thus Australian snake

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venoms have their predominant effect not at the site of the bite but rather acting generally on many systems within the body, interfering with neuromuscular transmission, muscle function, blood clotting, C.N.S. function and other more subtle effects on other systems. Therefore the main clinical effects of envenomation by Australian snakes relate to these actions of the venom.

The most potent components within Australian snake venoms are neurotoxins which interfere with neuromuscular transmission causing progressive, profound paralysis which without treatment, will result in death. The earliest signs are usually manifest in the facial muscles, with 'droopy eyelids', blurred vision, and difficulty with speech. Over a period of 18-24 hours this paralysis extends to finally involve all muscles involved in respiration and the patient is unable to breathe.

Some Australian snake venoms contain components which not only will interfere with neuromuscular transmission but also cause destruction of skeletal muscle. In other species while no paralysis is evident, muscle destruction may be profound. The destruction of the muscle, though reversible, may be rapid and cause a severe weakness in the muscle mimicking paralysis. The products of muscle breakdown can result in kidney failure. Some venoms have a profound effect on clotting mechanisms of the blood with a resultant severe effect on coagulation. These patients may have blood which is totally unclottable in the laboratory situation, and while major haemorrhages are rare there are case reports of fatal brain haemorrhages associated with snake bite.

While no components in Australian venoms have been shown to directly effect the brain, it is a common finding in severe snake bite, especially in children, for there to be some impairment of consciousness. Often the child may collapse and become totally unconscious and even have some form of convulsion - recovery from this can be expected even before specific treatment is given. There are other primary and secondary actions of Australian venoms less easy to define and of less clinical importance.

As Australian snakes, in many cases, can only deliver a small quantity of venom this significantly modifies the potential danger from these animals. Thus the Common Brown Snake with the second most potent venom can deliver only a small quantity, making it much less dangerous potentially than such as the Tiger Snake whose venom is less toxic, but greater in quantity.

The treatment of snake bite in Australia falls into two areas. The first is First Aid, based on the knowledge that most of the important components in Australian venoms reach the blood circulation via the lymphatic system. Thus first aid aims at immobilization of the venom at the bite site through immobilization of lymphatic return; it is most practically achieved by a broad constrictive bandage applied first at the bite site, and then over the entire bitten limb at approximately the same pressure as used for a sprained ankle. This will not stop the blood flowing into or out of the limb and won't be painful for the patient; it can be left in place until the victim reaches full medical attention. Where the victim is wearing say jeans it is just as practical to bandage over these as to remove them, and it is probably better to leave them on, as their removal will cause movement of the limb and so increase venom absorption, as each time the limb muscles move they pump venom from the bite site towards the blood it is essential that the victim be maintained as still as possible, and the bitten limb be rigidly immobilised with some kind of splint. Probably splinting the limb is as important as the bandaging in delaying venom absorption. The wound should not be washed, cut or scratched, and no chemicals should be applied. The victim should be reassured that "with proper first aid and medical attention the likelihood of dying is extremely small, and though potentially fatal bites do occur, in many cases the snake injects too little venom to cause any substantial harm. Indeed many people bitten by snakes do not require antivenom at all".

When the patient reaches a medical treatment facility, it is necessary to determine if he/she has been significantly bitten and then institute the appropriate

treatment. Always inspect the bite site, because if bitten more than once it is likely that a potentially dangerous amount of venom will have been injected. The snake bite may leave distinct puncture marks, but more frequently it leaves a series of scratch marks which may be very fine and difficult to see, especially in the first half to one hour after the bite. For many Australian species such a bite may be virtually painless, and if the victim does not actually see the snake, they may be unaware they have been bitten. Obviously this can result in delay of first aid treatment with consequent problems; it must be appreciated that an almost invisible snake bite does not indicate a trivial bite, as even such a minor bite may be potentially fatal. This is particularly true in children.

Where someone has been systemically envenomated the treatment of choice is a specific antivenom to neutralize the venom. Determination of systemic envenomation is based on clinical evidence such as early paralysis, and general symptoms such as headache, abdominal pain, nausea, and impaired consciousness; also laboratory evidence such as abnormalities in the clotting system, elevated muscle breakdown products and other less specific derangements. In addition, the Commonwealth Serum Laboratories in Melbourne have developed a snake venom detection kit which allows determination of the correct monovalent antivenom. The use of this kit will progressively allow more cases to be treated with a specific monovalent antivenom rather than the more dangerous polyvalent antivenom used previously. As there is always the potential of a reaction to foreign protein, it is essential that antivenom only be given when full resuscitation facilities are available should an untoward reaction occur. With the use of adequate amounts of the correct antivenom the patient can be expected to make a full recovery.

While treatment of bites is important, prevention should not be forgotten. Important in Prevention is education and people should be aware of the presence of dangerous snakes and how to avoid them. Snakes have no inherent desire to attack man, and do so only when they feel potentially threatened. If people are aware of the presence of snakes and leave them well alone, bites are unlikely. By allowing rubbish and other debris to collect near housing, snakes may be attracted to feed on mice and other small animals living in it. Generally, an attempt to kill a snake will upset it to the point of attack in retaliation, so while it is justified killing snakes in the immediate vicinity of one's home, ruthlessly setting out to kill every snake one sees is a sure way of increasing the chance of snake bite, - in any case, it is now illegal in all States in Australia, where venomous snakes are protected except where they are known to be definitely threatening to man.

While there are many potentially dangerous snakes within Australia, there are also many others which are not. Sometimes people, especially children, are bitten by legless lizards which are thought erroneously to be snakes, and this needs to be remembered by those involved in the treatment of snake bite. Conversely children are occasionally bitten by snakes thinking them to be legless lizards and so unnecessarily and sometimes tragically, delay treatment.

To recap! the study of reptiles and amphibians is called Herpetology, and those involved in this study are known as Herpetologists. To many, an interest in reptiles is synonymous with some degree of foolishness, but it will be recognised that without these people involved in studying, collecting and keeping dangerous snakes, there would be no venom available for research or for the production of antivenom, and far more people would die of snake bite than is currently the case. While some amateur herpetologists who keep venomous snakes are irresponsible, the majority of herpetologists, both professional and amateur are very responsible individuals whose work has many benefits within the community, - better management of snake bite being just one of them.

\*(Paper presented by Julian White M.B.B.S., M.I.S.T., M.A.I.M.B.I.,  
Honorary Consultant on Envenomation, Royal Adelaide Hospital  
and Poisons Centre, Adelaide Children's Hospital.)

FROM THE JOURNALS with John Burrow

DEVELOPMENTAL DEFECTS IN THE PRIMARY DENTITION OF LOW BIRTH-WEIGHT INFANTS:  
ADVERSE EFFECTS OF LARYNGOSCOPY.

Trauma caused by laryngoscopy and oro-tracheal intubation affects mainly the maxillary anterior teeth. In this study the examination of the primary dentition of 63 low birth-weight, prematurely born children showed that developmental defects of these teeth occurred in 85% of intubated children compared to only 21% of nonintubated children, a fourfold difference. Trauma caused by laryngoscopy affects mainly the left maxillary anterior teeth; in the intubated group of children with defects of maxillary anterior teeth, 66% of the affected teeth were on the left compared with 33% on the right, a twofold difference.

Traumatic injury caused by laryngoscopy and endotracheal intubation at the critical period of amelogenesis may contribute to defects in the dentition of low birth-weight infants whose dental development already is compromised by derangements of calcium metabolism and other systemic factors.

(SEOW W. Kim et al. Paediatric Dent.  
March 1984. Vol. 6/1 )

Footnote.-Since reading this article I have seen 3 children with these described defects in two months. J.B.

THE EFFICACY OF THE LARYNGEAL REFLEX DURING RELATIVE ANALGESIA.

A total of 50 patients between the ages of 4 years and 18y. were included in this study. 25 of them received conservative dentistry using local anaesthesia alone. 25 further children matched for age and sex received conservative dentistry using inhalation sedation with nitrous oxide.

The concentration of nitrous oxide was titrated carefully to the needs of each patient. The concentration used ranged from 20% to 65%. A bolus of radiopaque dye (propyl iodone) was deposited on the tongue until the swallowing reflex was initiated. This was repeated in the middle of treatment and at the end of treatment. Within 5 minutes of recovery, a lateral view of the larynx and a postero-anterior view of the chest were taken using highly sensitive film and intensifying screens. From these views the distribution of radiopaque dye in the oropharynx and stomach was visualised.

None of the control (no sedation) or Nitrous oxide (sedation) patients had

any radiopaque dye in the larynx or bronchial tree. It is concluded that Relative analgesia with nitrous oxide does not cause any reduction in the efficacy of the laryngeal reflex.

(ROBERTS G.J. and WIGNALL B.K. Royal Dental Hospital School of Dental Surgery J.Dent. Res. 63(4) 494; April 1984)

PHENYTOIN-INDUCED GINGIVAL OVERGROWTH RESULTING IN DELAYED ERUPTION OF THE PRIMARY DENTITION.

One of the primary side effects noted since phenytoin was introduced in 1938 is gingival overgrowth in patients undergoing phenytoin therapy. The prevalence of this overgrowth has been reported to be as high as 78% and as low as 3%. A more realistic figure seems to be near the 40% level.

Gingival overgrowth begins to appear 2 to 3 months after the initiation of phenytoin therapy and peaks at 12 to 18 months. There is evidence that this overgrowth is preventable in most cases by oral hygiene and dental prophylaxis, however one case has been reported of gingival overgrowth prior to the eruption of the primary dentition. This report documents a case of delayed passive eruption secondary to phenytoin therapy in a young child.

The patient, a 4-year old child, had been on phenytoin therapy since the first months of life. Radiographs revealed that alveolar but not gingival emergence had occurred.

Surgical excision of the excess gingival tissue was accomplished under general anaesthesia. Oral hygiene procedures were stressed and parental cooperation solicited. Three and nine months postoperative visits revealed no regrowth of gingival tissue and continued eruption of the primary dentition.

(CHURCH Lloyd F. and GRANDT Stephen K. J. Periodontol. 55(1) 19-22. Jan. 1984)

THE EFFECT OF CHEWING XYLITOL GUM ON THE PLAQUE AND SALIVA LEVELS OF STREP. MUTANS.

The eating of foods containing sucrose between meals can be highly cariogenic. The use of Xylitol, a sweet tasting polyol as a substitute for sucrose in chewing gum has been reported to cause about an 80% reduction in caries increment. This study showed that the chewing of Xylitol gum for 4 weeks caused a significant reduction in saliva levels and plaque proportions of Strep. Mutans.

(LOESCHE W. et al J.A.D.A. 108(4) 587-593 April 1984)